## CALIFORNIA SALMONID STREAM HABITAT RESTORATION MANUAL

## Fish Screen Operation and Maintenance Best Management Practices

- Fish screens shall be operated and maintained in compliance with current law, including
  Fish and Game Code, and Department of Fish and Game (DFG) fish screening criteria.
  DFG screening criteria may be referenced on the internet at:
  http://www.dfg.ca.gov/fish/Resources/Projects/Engin/Engin\_ScreenCriteria.asp
- Notwithstanding Fish and Game Code section 6027, fish screens and bypass pipes or channels shall be in-place and maintained in working order at all times water is being diverted.
- If a screen site is dewatered for repairs or maintenance when targeted fish species are likely to be present, measures will be taken to minimize harm and mortality to targeted species resulting from fish relocation and dewatering activities. The responsible party shall notify DFG before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for DFG personnel to supervise the implementation of a water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the responsible party will implement the following measures to minimize harm and mortality to listed salmonids:
- All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service (NMFS), Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
- The responsible party will provide fish relocation data to DFG on a form provided by the DFG, unless the relocation work is performed by DFG personnel.
- Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.
- If a fish screen is removed for cleaning or repair, a replacement screen shall be installed immediately or the diversion shut down until a screen is in place.
- Fish screens shall be inspected and maintained regularly (not less than two times per week) to ensure that they are functioning as designed and meeting DFG fish screening criteria.
- Existing roads shall be used to access screen sites with vehicles and/or equipment whenever possible. If it is necessary to create access to a screen site for repairs or maintenance, access points should be identified at stable stream bank locations which minimize riparian disturbance.
- Sediment and debris removal at a screen site shall take place as often as needed to ensure that screening criteria are met. Sediment and debris will be removed and disposed of where they will not re-enter the water course.

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- Stationary equipment used in performing screen maintenance and repairs, such as motors, pumps, generators, and welders, located within or adjacent to a stream shall be positioned over drip pans.
- Equipment which is used to maintain and/or repair fish screens shall be in good condition and checked and maintained on a daily basis to prevent leaks of materials that could be deleterious to aquatic life, wildlife, or riparian habitat.
- All activities performed in or near a stream will have absorbent materials designed for spill containment and cleanup at the activity site for use in case of an accidental spill. Clean-up of spills shall begin immediately after any spill occurs. The State Office of Emergency Services (1-800-852-7550) and DFG shall be notified immediately after any spill occurs.
- To the extent possible repairs to a fish screen or screen site shall be made during a period of time when the target species of fish are not likely to be present (for example, in a seasonal creek, repair work should be performed when the stream is dry).
- Equipment used to maintain and/or repair fish screens shall not operate in a live stream except as may be necessary to construct coffer dams to divert stream flow and isolate the work site.
- For minor actions, where the disturbance to construct coffer dams to isolate the work site would be greater than to complete the action, measures will be put in place immediately downstream of the work site to capture suspended sediment.
- Turbid water which is generated by screen maintenance or repair activities shall be
  discharged to an area where it will not re-enter the stream. If the DFG determines that
  turbidity/siltation levels resulting from screen maintenance or repair activities constitute a
  threat to aquatic life, all activities associated with the turbidity/siltation shall cease until
  effective DFG-approved sediment control devices are installed and/or abatement
  procedures are implemented.
- No debris, soil, silt, sand, bark, slash, spoils, sawdust, rubbish, cement, or concrete or washings thereof; asphalt, paint, or other coating material; oil or petroleum products; or other organic or earthen material from any fish screen operation/maintenance/repair or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into a stream channel. When operations are completed, any excess materials or debris shall be removed from the work area and disposed of in a lawful manner.